

What is claimed is:

1. An electrochemical cell comprising: a casing; an anode having as active material a material which has a melting point greater than about 150 degrees C. and which is selected from groups IA and IIA of the Periodic Table; a cathode having as active material a material which is selected from the group of materials consisting of metal oxides, metal oxide bronzes, and carbon monofluoride; and an electrolyte comprising a lithium salt and an organic solvent, said solvent characterized by having a boiling point greater than about 100 degrees C. and a dielectric constant greater than about 5.

2. A cell according to claim 1 wherein said anode active material is lithium.

3. A cell according to claim 1 wherein said cathode active material is silver vanadium oxide.

4. A cell according to claim 1 wherein said anode active material is lithium and wherein said cathode active material is silver vanadium oxide.

5. A cell according to claim 4 wherein said solvent is a mixture of propylene carbonate and diglyme and wherein said salt is lithium trifluoromethane sulfonate.

6. A cell according to claim 4 wherein said solvent is a mixture of propylene carbonate and diglyme.

7. A cell according to claim 6 further comprising a separator means between said anode and said cathode, said separator means composed of a material which is porous for passage of said electrolyte therethrough and which is characterized by being wettable to said electrolyte and by having a melting point which is greater than about 130 degrees C.

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8. A cell according to claim 7 wherein said separator material is composed of a laminate of a polypropylene membrane and a polypropylene mesh.

9. A cell according to claim 7 wherein said salt is lithium trifluoromethane sulfonate.

10. A cell according to claim 1 wherein said solvent is a mixture of propylene carbonate and diglyme and wherein said salt is lithium trifluoromethane sulfonate.

11. A cell according to claim 1 further comprising a separator means between said anode and said cathode, said separator means composed of a material which is porous for passage of said electrolyte therethrough and which is characterized by being wettable to said electrolyte and by having a melting point which is greater than about 130 degrees C.

12. A cell according to claim 1 comprising means for maintaining the cell dimensionally and chemically stable during repeated exposures each of about one hour to a temperature of about 130 to 135 degrees C.

13. A cell according to claim 1 wherein said casing is hermetically sealed and is composed of corrosion-resistant material.

14. A cell according to claim 1 wherein said cathode active material is carbon monofluoride, said cathode includes a current collector composed of a material selected from the group consisting of a superferrite material and carbon coated titanium, said salt is selected from the group consisting of lithium tetrafluoroborate and lithium trifluoromethane sulfonate, and said solvent is gamma-butyrolactone.

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15. An autoclavable electrochemical cell comprising a casing; an anode having as active material a material which has a melting point greater than about 150 degrees C. and which is selected from groups IA and IIA of the Periodic Table; a cathode having as active material a material which is selected from the group of materials consisting of metal oxides, metal oxide bronzes, and carbon monofluoride; and an electrolyte comprising a lithium salt and an organic solvent, said solvent characterized by having a boiling point greater than about 100 degrees C. and a dielectric constant greater than about 5, the cell further characterized by being dimensionally and chemically stable during repeated exposures each of about one hour to a temperature of about 130 to 135 degrees C.

16. A cell according to claim 15 wherein said anode active material is lithium and wherein said cathode active material is silver vanadium oxide.

17. A cell according to claim 15 further comprising a separator means between said anode and said cathode, said separator means composed of a material which is porous for passage of said electrolyte therethrough and which is characterized by being wettable to said electrolyte and by having a melting point which is greater than about 130 degrees C.

18. An electrochemical cell comprising: a casing; a lithium anode; a silver vanadium oxide cathode; and an electrolyte comprising lithium trifluoromethane sulfonate and an organic solvent, said solvent being a mixture of propylene carbonate and diglyme.

19. A cell according to claim 18 further comprising a separator means between said anode and said cathode, said separator means composed of a material which is porous for

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passage of said electrolyte therethrough and which is characterized by being wettable to said electrolyte and by having a melting point which is greater than about 130 degrees C.

20. A cell according to claim 18 comprising means for maintaining the cell dimensionally and chemically stable during repeated exposures each of about one hour to a temperature of about 130 to 135 degrees C.

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